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EXAMINER

PAIK, STEVE S

ART UNIT

PAPER NUMBER

2876

DATE MAILED: 01/24/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

JAN 27 2003

Office Action Summary	Application No.	Applicant(s)
	09/766,806	BARBER ET AL.
Examiner	Art Unit	
Steven S. Paik	2876	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 20 November 2002.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-15 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-15 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on 20 November 2002 is: a) approved b) disapproved by the Examiner

If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.

4) Interview Summary (PTO-413) Paper No(s) _____.

5) Notice of Informal Patent Application (PTO-152)

6) Other: _____

DETAILED ACTION

Response to Amendment

1. Receipt is acknowledged of the Amendment filed November 20, 2002.

Drawings

2. The proposed drawing correction and/or the proposed substitute sheets of drawings, filed on November 20, 2202 have been approved.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Wang (USP 5,739,518).

Regarding claim 1, Wang discloses a method and system for operating an optical reader having a 2D image sensor (21 and fig. 5, ll. 49-51), the method comprising the steps of:

capturing a partial frame of image data (col. 10, lines 52-63) from the 2D image sensor (col. 5, ll. 15-16); and

processing image data of the partial frame of image data. Wang teaches a method for using predetermined sampling patterns (partial frame) to identify a data type and a decoding unit having a capability to implement a plurality of dataform decoding protocols for processing sensed data according to appropriate data type (col. 3, ll. 24-50). Wang further teaches that the use such sampling patterns typically requires readout of only a limited amount of image data and

may therefore be carried out much more quickly and efficiently than reading out all of the image data. The limited amount of image can be broadly considered as a partial image since it is not the whole image. The disclosed readout process inherently includes the step of processing the partial frame of the image data.

Regarding claim 2, Wang discloses the method and system as recited in rejected claim 1 stated above, where the capturing step includes the step of capturing image data corresponding to a linear pattern of pixels (PDF 417 in Fig. 7 and col. 14, ll. 58-60).

Regarding claim 3, Wang discloses the method and system as recited in rejected claim 1 stated above, where the capturing step includes the step of capturing image data corresponding to a plurality of angularly offset linear pattern of pixels (maxiCode, DataMatrix in Fig. 7).

Regarding claim 4, Wang discloses the method and system as recited in rejected claim 1 stated above, where the capturing step includes the step of capturing image data corresponding to a plurality of vertically spaced apart horizontally oriented linear patterns of pixels (Code 1 shows a center guard pattern which makes vertical spaces apart horizontally linear patterns of pixels).

Regarding claim 5, Wang discloses the method and system as recited in rejected claim 1 stated above, where the capturing step includes the step of capturing image data corresponding to a grouping of pixels about a center of the image sensor (Fig. 4 and col. 6, ll. 59-67).

Regarding claim 6, Wang discloses the method and system as recited in rejected claim 1 stated above, where the processing step includes the step of reading the image data out of a memory device (82 in Fig. 2 and col. 3, ll. 36-44).

Regarding claim 7, Wang discloses the method and system as recited in rejected claim 1 stated above, where the processing step includes the steps of reading the image data out of a

memory device and attempting to decode for a decodable symbol which may be represented in the image data (col. 3, ll. 46-50).

Regarding claim 8, Wang discloses the method and system as recited in rejected claim 1 stated above, where the method further includes the step of capturing a full frame of image data if the processing step reveals that a 2D symbol is likely partially represented in the partial frame of image data (col. 15, ll. 45-50).

Regarding claim 9, Wang discloses the method and system as recited in rejected claim 1 stated above, where the method further includes the step of capturing an adaptively positioned partial frame of image data if the processing step reveals that a 2D symbol is likely partially represented in the partial frame of image data (Wang suggests using a sampling reference (partial image) to decide type of dataform after comparing with reference data. The process generates identification indicia which activates a decoding protocol suitable for decoding the frame of image of the sampled reference).

Regarding claim 10, Wang discloses the method and system as recited in rejected claim 1 stated above, where the method further includes the step of attempting to decode for a decodable symbol represented in the image data, the method further including the step of capturing a full frame of image data if the processing step reveals that a 2D symbol is likely partially represented in the partial from of image data (col. 13, ll. 15-23).

Regarding claim 11, Wang discloses a method and system for operating an optical reader having a 2D image sensor (21 and fig. 5, ll. 49-51), the method comprising the steps of:

(a) in a partial frame operating mode, capturing a partial frame of image data (col. 2, ll. 61-63); and

(b) attempting to decode a symbol representation of the captured partial frame of image data (col. 3, ll. 17-20); and

(c) switching operation of the reader to a full frame capture mode if the reader fails to decode a symbol representation in step (b). Figure 6B illustrates steps involved with identifying dataforms and attempting to decode them appropriately. The step 128 may include a partial frame of image data, and step 138 may include another. When step 128 fails to find the first dataform, the next step is automatically switched to include the second dataform. This switching step inherently enables the optical reader to operate in a full frame capture mode. Wang further teaches that the use such sampling patterns typically requires readout of only a limited amount of image data and may therefore be carried out much more quickly and efficiently than reading out all of the image data. The limited amount of image can be broadly considered as a partial image since it is not the whole image. The disclosed readout process inherently includes the step of processing the partial frame of the image data.

Regarding claim 12, Wang discloses the method and system as recited in rejected claim 11 stated above, where the capturing step includes the step of capturing image data corresponding to a linear pattern of pixels (PDF 417 in Fig. 7 and col. 14, ll. 58-60).

Regarding claim 13, Wang discloses the method and system as recited in rejected claim 11 stated above, where the capturing step includes the step of capturing image data corresponding to a plurality of angularly offset linear pattern of pixels (maxiCode, DataMatrix in Fig. 7).

Regarding claim 14, Wang discloses the method and system as recited in rejected claim 11 stated above, where the capturing step includes the step of capturing image data

corresponding to a plurality of vertically spaced apart horizontally oriented linear patterns of pixels (Code 1 shows a center guard pattern which makes vertical spaces apart horizontally linear patterns of pixels).

Regarding claim 15, Wang discloses the method and system as recited in rejected claim 11 stated above, where the capturing step includes the step of capturing image data corresponding to a grouping of pixels about a center of the image sensor (Fig. 4 and col. 6, ll. 59-67).

Response to Arguments

Applicant's arguments filed November 20, 2002 have been fully considered but they are not persuasive.

Rejections under 35 U.S.C § 102

Regarding claims 1 and 11, the applicant states that Wang (US 5,739,518) fails to teach or suggest "capturing a partial frame of image data" as required in each of independent claims 1 and 11.

The examiner respectfully disagrees. Wang discloses the use particular sampling patterns. The use of such sampling patterns typically requires readout of only *a limited amount of image* data and may therefore be carried out much more quickly and efficiently than reading out *all of the image data*. The *limited amount of image* can be broadly considered as a partial frame of image data since it is clearly not a full image. Furthermore, the steps 126, 128, 136 and 138 shown in Fig. 6B fairly suggest a partial mode (130, 132) and full mode (144, 134) operation as recited in the independent claims. Since Wang discloses or fairly suggests all the elements of

the independent claims 1 and 11, their dependent claims 2-10 and 12-15 remain rejected as communicated in previous Office Action (paper No. 9)

Accordingly, the examiner respectfully maintains the same ground of rejection for claims 1-15 as communicated in the previous Office Action.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven S. Paik whose telephone number is 703-308-6190. The examiner can normally be reached on Mon - Fri (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael G. Lee can be reached on 703-305-3503. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0530.

Steven Paik
Steven S. Paik
Examiner
Art Unit 2876

ssp
January 21, 2003



MICHAEL G. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800